

HISTORY
OF THE
U.S. NAVAL WAR COLLEGE

No. 2

VADM John T. Hayward
USN (Ret.)

ORAL HISTORY PROGRAM

Naval War College

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PREFACE

This volume consists of the transcript of a taped interview with VADM John T. Hayward, USN (Ret.) The interview was conducted by Dr. Evelyn M. Cherpak, Assistant Curator, Naval Historical Collection, in May, 1977, for the Naval War College Oral History Project entitled "The History of the Naval War College."

VADM Hayward became President of the Naval War College in 1966 after a long and distinguished naval career. He graduated from the U.S. Naval Academy in 1930 and earned a reputation as an outstanding naval aviator and theoretical physicist. The interview with VADM Hayward, although, in part, autobiographical, focuses mainly on his years as President of the Naval War College, 1966-1968. His comments on the educational philosophy and atmosphere at the Naval War College prior to and during his tenure, and the administrative and bureaucratic problems he faced in trying to reform the curriculum, improve the quality of a NWC education, and build a modern plant facility will be of interest and value to researchers of this period.

VADM Hayward has read the typescript and has made some minor editorial changes. These changes have been incorporated in the retyped copy, but the typescript, essentially, strives to preserve the spoken word.

BIOGRAPHICAL AND CAREER DATA

VADM JOHN T. HAYWARD, USN (RET.)

VADM John T. Hayward was born in New York City on November 15, 1908. He served in the Navy as an enlisted man for fifteen months prior to his appointment to the Naval Academy from which he graduated in 1930.

Immediately after graduation, he served on the USS RICHMOND and then entered flight training school at Pensacola, Florida. He was graduated as a naval aviator in 1932 and subsequently served in various patrol squadrons and aviation units.

Prior to and following the outbreak of World War II, he served as Assistant Chief Engineer for Instruments at the Naval Aircraft Factory in Philadelphia and while so assigned had duty in 1940-41 as a Naval Observer with the Royal Air Force in Britain. During World War II, Hayward saw action in the Central, South, and Southwest Pacific as Commander of Bombing Squadron 106. He was awarded numerous medals including the Legion of Merit and the Distinguished Flying Cross for heroism and bravery in action.

Before the end of the war in 1944, Hayward became Experimental Officer at the Naval Ordnance Test Station, Inyokern, California, where he worked on all phases of rocket development and the development of and study of destruction caused by the atom bomb. In 1948, he became Director of Plans and Operations for the Armed Forces,

Sandia Base in Albuquerque, New Mexico, concerned with the use of atomic weapons and the integration of military requirements with the Los Alamos Scientific Laboratory.

VADM Hayward has had over 12,000 hours of flight hours as a pilot and has participated in the development of new aircraft. He was the first pilot to land attack aircraft on heavy carriers and had the job of introducing the atom into the fleet. For three years he commanded heavy attack Squadron Five. He then served with the Atomic Energy Commission, commanded the carrier escort vessel POINT CRUZ, and from 1954 to 1956 was in command of the Naval Ordnance Laboratory.

In 1956 and 1957, VADM Hayward commanded the FRANKLIN D. ROOSEVELT, a giant aircraft carrier. Shortly thereafter he became Special Assistant to the Director of the Strategic Plans Division in the office of the Chief of Naval Operations. In October, 1957 he was appointed Assistant Chief of Naval Operations for Research and Development and then in 1959 became Deputy Chief of Naval Operations for Development.

From 1962 to 1963 he was Commander of Carrier Division Two and then he assumed command of the anti-submarine warfare force, Pacific Fleet. In 1966, he was appointed President of the Naval War College in Newport, Rhode Island, and served in that position until his retirement in September, 1968.

Since his retirement from the Navy, VADM Hayward has served as Vice President of International General Dynamics and is also a member of the board of the Stedman Mutual Fund, the MIT Laboratory, and the Hertz Foundation. In addition, he is a consultant to UNIVAC, Babcock and Wilcox, and the Livermore Laboratory. Admiral Hayward is married to the former Leila Hyer of Pensacola, Florida. They have five children and now reside on Barclay Square in Newport, Rhode Island.

NAVAL WAR COLLEGE
NEWPORT, RHODE ISLAND
ORAL HISTORY PROGRAM

THE HISTORY OF THE NAVAL WAR COLLEGE

Interviewee: VADM John T. Hayward, USN (Ret.)
3 Barclay Square, Newport, Rhode Island

Interviewer: Dr. Evelyn M. Cherpak

Subject: The History of the Naval War College

Date: May 6, 1977

C: This is the first oral history interview with VADM John T. Hayward, USN (Ret.) My name is Evelyn Cherpak. Today's date is May 6, 1977. The interview is being conducted at the home of ADM Hayward on 3 Barclay Square, Newport, Rhode Island. ADM Hayward, I've been looking forward to this interview for some time, and I wonder if you could tell me, in brief, something about your boyhood, your early life and education, and just how you happened to join the Navy.

H: Yes, I'd be delighted to. I was born in New York City, in Manhattan, on the 15th of November, 1909, actually, though my official age in the Navy was 1908.

C: Yes, I noticed that.

H: Of course, I had to enlist in the Navy; I had to be 17. It's an involved story, but nevertheless that's where I got my name--my nickname. I was not a very good scholar when I was young. I attended a Military Academy, a Christian Brothers school, from which I was dismissed when I was in the eighth grade.

C: Do you want to tell me why?

H: So (laughter), they put me into a Jesuit School, Loyola, where I studied Greek and Latin, but not too much. I was not very interested in school, but I was very interested in flying, in aviation. My father was one of the first aviators in the country. He wrote many books on the subject, and I was quite interested in it. And they, actually, used to go over to Hazelhurst Field. I got my first airplane ride when I was about six or seven years old, and naturally was very interested in becoming an aviator. It was a very glamorous thing in those days. But I didn't like school, and anyway it was a nice warm day in May in 1925 when I saw that big flag--I'd play hookey from school that day--and I saw that nice big flag saying join the Navy, see the world. So I went into the 23rd Street recruiting station, and as I recall, it was the 15th of May, yes, it was, and went in and the man said I was very young. And I said, well, how old do you have to be, and he said you have to be seventeen--so I said, well, I'm seventeen. He had the doctor examine me, and then he gave me the papers to get my mother and father to sign, which I then went and proceeded to do. But they didn't sign them. I conned other people into signing them. So, I was in the Navy. I left New York on the Fall River Line and came to Newport on the COMMONWEALTH. We always arrived in port down here at 3:30 in the morning and then proceeded

to boot camp. When I went in there the boatswain's mate took a look at me and said where did that chicken come from, and my name has been Chick Hayward ever since. I went through training here. I wasn't very happy with it; I didn't like the Navy. I hoped my father would come and get me out. When he did come up to that nice big building that's next to the quarters where I finally left the Navy, Captain Jackson was the skipper, and instead of telling him how old I was, he said as long as I was in the Navy I was going to stay in the Navy, and he wasn't going to do anything about it.

C: Why didn't you like it, may I ask?

H: Oh, I had to sleep in a hammock; beans and prunes for breakfast; \$21 a month; 'oh, it was terrible. And the Navy then was only 83,000 people, and we used to have to parade and sing on the big field in front of the War College and run up and man the yards on the CONSTELLATION. Every Friday afternoon we'd race up, and being as I was little and light I always had to go way up to the top. But, nevertheless, I wasn't very interested in the Navy.

C: Did you find the discipline strict?

H: Yes, very much so. Oh, it was very harsh, and I was very young, and there were a lot of older people. But I ran into a very fine man, Father Brady, who was the chaplain. He was the man who I felt had more influence on my life as far as education was concerned. He was

a very tough character. Down where the Command and Staff school is was Barracks B, and I used to have to sleep in a hammock down there, and we all lived there, and he had his office in the barracks. I remember one day when he heard a lot of cussing, he raced out and hauled off and hit me. I was the first man at hand. I was very aggrieved because I said that I didn't do it, and all he said was to get the guy that did, because he was convinced that the sailors were all the time what we called bulkheading--when they saw the chaplain they'd start to cuss.

C: Why did they do that?

H: Just to see what his reaction would be. He was a great big six-footer, he had the Navy Cross, he's been with the Marines at Belleau Woods and he was tough as nails. And that same little old chapel that's down there is where he used to make me go and serve Mass. He wouldn't let me go out on the town or anything. He was going to make darn sure that I didn't get into any trouble. Well, he taught me mathematics, then he taught me about the Naval Academy and what I would have to do to get to the Naval Academy. The big thing about the Naval Academy was I wouldn't have to wash my own clothes. And the food would be better, and it was an opportunity. And so he really educated me. I remember I hadn't graduated from high school, and he really was a teacher. He taught

us to study and never to waste any time. In the lower part of what is now Sims Hall, in a big room there, I had to paint on the wall--all around--every geometry problem that they had asked to go to the Naval Academy.

C: Oh, so it was a kind of prepping ground...

H: We didn't have a formal thing--Oh, when I talk to these people now, I mean this is one of the best prep schools in the country to get to the Naval Academy. But this was just beginning. You must remember it was Secretary Daniels who made it possible for an enlisted man to go to the Naval Academy.

C: Oh, what did he do?

H: Up until that time it was forbidden; you couldn't go from the ranks to the Naval Academy.

C: It was kind of a caste system, then.

H: Oh, very much. So, when I did study, I studied very hard. I wanted to show my father -- I was going to show him. So I worked from September until the examinations were given on the third Wednesday in April. I had to take physics, algebra, geometry, American history, ancient history and English. And I really studied. My hardest subject was English. I had perfect marks in mathematics, algebra, geometry and physics, and good marks in history. But English was--I got a barely passing grade in English. I think they gave it to me because I had perfect marks in mathematics. But I wasn't very interested in such things

they asked like "Sleep beloved sleep from pole to pole, Mary, Queen of Heaven, save my soul." Who said it? Where did it come from? Why? Who was interested? For your information, it's the "Ancient Mariner," and I've never forgotten it. So, I got to the Naval Academy, and I was determined to do as well as I could there. To begin with, having been a sailor, you weren't very popular at that time. They sort of beat on you as a Plebe. Always, if you had been a sailor you were supposed to be a smart alec. Anyway, the midshipmen used to give us a bad time.

C: They sort of looked down on you, I guess.

H: Yes, yes. That's changed so much now, but at that time all those people that I was involved with, to show you, of the nineteen I believe it was, nine of us made admiral. Now one of them who made admiral, he failed the first time, Frank Williamson. He was from Tiverton. He had six brothers in the Navy, but the next year he went to the Naval Academy. He eventually became an admiral too. But the attrition was very high. I loved the Naval Academy. I never had a finer four years, and I worked real hard, and I stood real high in my class. I got better each year. Out of 600---about 700 the first year--I stood 269, and then finally my last year I stood 9 in my class. And so I really worked hard at it. But I never lost my desire to fly and my love of aviation and the sea.

C: What had first attracted you to the Navy? What did you find about it that made you want to pursue a naval career?

H: Well, once I got in the Navy, with the ships and the aircraft, and I remember the SHENANDOAH and going aboard her, and she was based here on the Patoka. And I remember being--well, I just thought it was the most exciting career--and the ships, I loved the ships.

It was really fun to go to sea. I liked--the opportunities that were there, but nobody was going to give it to you, you had to take it. In those days there wasn't all this great big push that you have--you had to do it yourself. I mean, if you were going to take a correspondence course, you took it yourself. The chaplain was the man responsible to see that people tried to educate themselves. There was no real formal approach to try to train people as well as they do today, when I was a young officer. But it got better; you must remember we had 83,000 men--officers and men in the Navy then. We had ten battleships and one aircraft carrier--that was the LANGLEY.

C: That seems so small compared to today.

H: It was. Very small compared to today. Now, once I got to the Naval Academy--the Naval Academy was the background of my real desire for the Navy - the tradition, the education, and way the whole thing went. People go through the Naval Academy and either love it or hate it.

And I loved it. I made up my mind that I was going to continue to educate myself all the time - that I was going to continue to learn. Even to this day I study all the time. I got into that habit. In my class, at this particular time, the Depression came and my class didn't have enough aviators. So my class was the first class at the Naval Academy that went directly to aviation training.

C: You were in what class?

H: '30, 1930. They gave us the opportunity to go to aviation right away. Up until that time you had to put in two years at sea before you could become an aviator. They had some very silly notion you should just be a Naval officer and navy aviation would be a trade. Well, I was an advocate of aviation and wrote many things about it, and so I was selected and went. When I graduated in June, 1930, they sent you to Norfolk or San Diego and you went to flight training. And you then--if you soloed--if you were able to pass the test and fly yourself you were then sent on to Pensacola. If you didn't, you failed and you went to sea. And once I soloed, when then, they had only two classes in Pensacola a year, so I had to go to a ship while I waited for the class to convene. So I came and went to the light cruiser RICHMOND, and became the main engine division officer for the short period before I went to Pensacola. When I went to Pensacola, there were 67 of us in this class, and only 17 of

us graduated as aviators. It took a whole year and we flew everything from sea planes to land planes and fighters. It was a very thorough education, and it was so much broader than the one specialty of today. We had to do such things as taking an entire airplane apart, the engine apart, overhauling it, reassembling it, and flying it ourselves. And so when I left I was still studying. While I was there, of course, you had to study. Oh, you studied everything from taking 26 words of radio code a minute; you had to take that to graduate. And then when I was ordered to the USS LANGLEY, aircraft carrier, and I began to study on my own again. But I was very interested then in all sorts of engineering, but primarily in instrumentation and flying in bad weather, which I did. But I also came to the conclusion that at that time--that was in 1933--by this time the Depression was at its height, the Navy was on the downswing, and I was an ex-sailor. I didn't think I'd have much chance to get very far in the Navy anyway. I mean--there was still some feeling in those early days. But I decided I was going to go study something that had nothing to do with the Navy.

C: I was going to ask you if you had another interest, another intellectual interest.

H: Of yes, I was going to study something that had absolutely nothing to do with the Navy, that I was going to be able to use when I left. What do you think I picked?

I picked theoretical physics, Einstein. I studied it on my own. I went to the University of Pennsylvania at night when I was a test pilot. I studied theoretical physics. Oh, if you want to know what...

C: Did you get any advanced degrees in that area?

H: Yes, a little later on I got a Masters Degree - on the assumption that the Navy would never, by any stretch of my imagination, never use anything that Einstein had thought about in theoretical physics. So you can see how wrong I was. A lot of people say wasn't I very smart to pick out theoretical physics. Well, it wasn't picked that way. It was career manglement, it wasn't management.

C: But it turned out alright. You did use it later.

H: It turned out that it opened a whole new world to me. People such as Enrico Fermi, who taught me, Tella, Lawrence, Oppenheimer, Von Noyman. I had the best instructors in the world. What happened was that as I went on I learned more and more about this and the Navy decided to make me the assistant chief engineer of our aircraft factory - as a lieutenant in Philadelphia. I'd been on the LANGLEY, the SARATOGA, the RANGER and the LEXINGTON. And I'd been on big boats in Panama and I'd been ADM King's pilot, so they decided I had flown. I love to fly.

When I retired I had more flight hours as an aviator I guess than any admiral ever had--over 13,000 hours as a pilot. So I was sent there as assistant chief engineer for instruments.

C: Was this a Navy factory?

H: Oh, yes. Naval Aircraft Factory at Philadelphia. The Navy used to be required by law to build 5 percent of those aircraft. They contracted out too, but then as assistant chief engineer I used to have to test them to see that they lived up to the specifications and that they would come out of a spin. I used to make as many as one hundred carrier landings a day onto a platform they had there. But while I was there then, I enrolled in the University of Pennsylvania at Moore School and studied more physics. But then, of course, the war was coming. I had been involved with a lot of the foreigners. I'd been to Germany in '36. But war was coming and I wanted to go to the war. They weren't about to let me go at first, but I had the job when the lend lease came and when Roosevelt wanted us to go over to England to see what was going on in the war, to see what the United States would have to do, I volunteered and went. I was with the British and I delivered aircraft to them and I bought millions of dollars worth of instruments in this country as assistant chief engineer for instruments at the aircraft factory. As a Lieutenant, I was the contracting officer, and I was authorized to buy all the horizons, navigational instruments and things of this kind. Again, they let me go and I went to war. I went to the Pacific.

C: Did you see any action in WWII? Could you tell me about what happened to you then?

H: Oh, yes, yes. Well, I went to England. I was there in the Blitz of England in the first part of the war, as an observer like many you probably have heard of. ADM Boone was over there, oh, there were quite a number-- the admiral here, Gus Welburn, he was on the British ship that was hit. But I was with the Royal Air Force at a place called Peterborough, flying bombers, Wellingtons. The object of the whole exercise, the president did it on his own, was to make sure that we would learn about everything that was required in fighting and the Germans were supposed to be so superior. When we came back we had to implement what we thought had to be done to our aircraft.

C: To improve it?

H: For instance our airplanes had only 230 caliber guns and here the British Spitfire had 650 caliber. And they had self sealing tanks. We didn't have all of that. So they sent this whole group of observers all the way from commanders to captains and they fanned them out through the whole war situation. Originally I was to go to France but Dunkirk came and it fell. I did that particular job and I left and was in London the 29th of December, 1940--when it was all burned down and bombed. I came back, I finished my job and did what we had to do, and I departed for the Pacific.

C: Did you fly there?

H: Oh, yes. I was commanding. I led the first raid against Wake Island. I fought in the Central, the South and the Southwest Pacific. I did the original work-- the first work at Tarawa for General Shoup. I was on Guadalcanal, I led one of the first raids against Kahili, then I was in New Guinea with the Fifth Air Force, and I led the first raids against Palau, and my aircraft were the first aircraft to get back to the Philippines. The story of my squadron was Bombing Squadron 106. That was one of the first B-24 squadrons in the Navy. It was a B-24, an air force airplane, it wasn't the PB4Y1 or anything. It was strictly an air force airplane that we had been given, because when ADM Mitcher was my boss, Uncle Pete, the PBY was a dead duck--we were getting shot down, so we wanted a high altitude and a good aircraft and a long-range one. The Navy decided that they would take the B-24's and they would give the air force the Renton Lake plant in Boeing where they would build more B-17's instead of the old sea planes like the RANGER. But I was in all of that, and I went into Munda and Bouganville in the Bouganville operation, and then the Admiralty Islands in Alanda. I was there roughly two years.

C: Where did you go after that?

H: Well, on the way back I wanted to go to be an air group commander on the ship. I had been gone two years

and ADM Nimitz, he was a great man, I'll always remember him. I had to bring my airplanes back to the United States for training. But when I landed my B-24 at Kaneohe in 1944, and, of course, when you lived out in the field like that you were pretty raggedy, but there standing on the ramp waiting to meet me was ADM Nimitz--in his shorts, incidentally. And I couldn't get over it, but he came and put his arm around me and took me up to his quarters and I was there two or three days with him. He met every commanding officer. But then he talked about the war and what I wanted to do. And I briefed the staff and they were going to put me on his staff, but at that particular time in life a strange event was happening. They were looking for somebody with a theoretical physics degree that was a military guy to go work in the Manhattan district.

C: So you were involved in that, then?

H: I was taken--I came back and went to it in 1944. I became the first experimental officer at China Lake, which was the Inyokern because we were building the explosive components there, and I was going to do the work on the actual field testing of the weapons themselves, how it operated. I worked directly with Dr. Oppenheimer and ADM Parsons worked at Los Alamos, he was a captain then. And Dick Ashworth, who was a good friend of mine, worked over there. I was told then that I was never going back to war because I was going to have the job of

doing all of that and they didn't want anybody--I wasn't allowed out anyplace. I started there, and we did do the bomb business, we built the plant, the weapons...

C: Was this the H bomb or a A bomb?

H: This was the A bomb.

C: The A bomb came first didn't it?

H: Well, the A bomb was the first one. The first one dropped on Hiroshima was uranium and the second one was a plutonium implosion device. The first one was a gun device, you see, and it was called the Little Boy and the other, the Fat Man, and I went out with it. And then right after the war ended, right after the bombs were dropped there was lingering radioactivity on Hiroshima and Nagasaki, so I was sent in with a Marine and an interpreter and my geiger counters. I wrote a 450 page study on Hiroshima and Nagasaki.

C: Was that on the after effects of the bombs?

H: Yes. And there was no lingering radiation, you see.

C: Oh, there was none?

H: No, there was no induced radiation. Then I came back to the United States, to China Lake. What was going to happen to the Manhattan district nobody knew. But the Atomic Energy Act was passed on 1 January 1947. During that particular period I was working as to how we would--well, I went and did the Bikini tests. I have all of those pictures of all of that. And then when they passed

the Atomic Energy Act I became a plans and operations officer for atomic warfare for the armed forces, which was put under General and ADM Parsons. I was stationed then in Albuquerque, New Mexico, Sandia. And I formed the Sandia situation there, took the Z Division down from Los Alamos and we began to build the Mark VI bomb, which was the follow-on. I began to figure how we were going to use this and incorporate it into the Navy.

C: How you were going to utilize the bomb in the Navy?

H: Yes.

C: What did you come up with? How were you going to utilize it?

H: Well, I was going to put it aboard ship, and I was going to put it on aircraft. And so I was given the job of doing it.

C: Oh, of introducing, I would say, the bomb into the Navy and future naval warfare.

H: And I had the job of not only doing the airplane, I was allowed to pick any man I wanted, in the Navy, for the job.

C: And who did you pick?

H: Oh, I picked - most of them made admiral. There was Tom Conally, Joe Japp, Steve Morrison, all admirals, Ashworth, and we formed one big group, and we bought a new airplane. The first one was the AJ; the second one was the A-3D. We designed the airplane around a 10,000 lb

bomb, 16" in diameter and 128" long. And so I went and modified the ROOSEVELT, the CORAL SEA, and the MIDWAY to accept the bombs. Then we assembled the crews to train them on how to put them together. It took 48 hours to put them together. But not anymore. It's a wooden weapon now. But then I did that. And at that particular time when I finished, I flew the first ones across to the Mediterranean. The Atomic Energy Commission then asked for me and I went to work as the civilian head of weapons research for them.

C: As a civilian?

H: I was out of uniform.

C: You did get a Ph.D. in physics too?

H: Oh, yes, yes.

C: Where did you get that?

H: At the University of California, Dr. Lawrence.

C: At Berkeley?

H: Yes. They were our contractors.

C: When did you manage to sandwich that in?

H: When I was at Los Alamos. They ran Los Alamos. They were our contractor. And they were all there. Oppenheimer's at the University of California. And I did some of my courses at Cal Tech when I was at Inyokern with Charlie Lauritsen and those people. But I was immersed in all of that from '44 on and I became head of weapons research. Then I had the job of making the programs for

all the weapons advancement and running the programs at Los Alamos.

C: So the Navy kind of let you go then? You were assigned out.

H: I didn't report and they didn't have anything to do with me, but I was still in the Navy, but that was the way the agency worked. As a matter of fact, that's where I first ran into Captain Rickover, as Dr. Hayward. He and I became fast friends. Admiral Rickover is an excellent man. We brought him in to educate him, and when he told me that he was going to build an atomic submarine I said well, you're going to have a lot of problems. What I do is so top secret I don't even talk to myself, I mean, nobody knows what I do, but everybody's going to know what you do.

C: Well, did you ever collaborate? On submarines?

H: Oh, yes. Later I did. I did all of the tests up to and including the first Hydrogen bomb. The fusion device, in November, 1952, I had been involved in that and at the same time, the same year, I started the Livermore Laboratory. That's the Lawrence Radiation Laboratory in Livermore, California, now. I hired Harold Brown for the first job. He was a theoretical physicist; he was 27 years old. I went all through that and then when the Republicans came to town I didn't like Mr. Strauss who was going to take Gordon Dean's place, and the President asked me what I wanted to do. I had my chance to talk to him.

I said I want to go back in the Navy.

C: So this is when you returned-around 1953?

H: And I said I don't know whether they're going to take me back because I'm a captain, and I would like to captain a ship, but I haven't been on a ship except to land on it.

C: Did you get your opportunity then?

H: I certainly did. I became captain of an aircraft carrier and a task group commander in the Yellow Sea to close out the Korean War.

C: Do you think Truman had any influence in this?

H: Yes, called them up and said do it. But I got the ship and I closed out the Korean War as a task group commander in the Yellow Sea. I had the ground support for the First Division Marines from the Han to the Yalu River, and a Marine air group. I had British destroyers, Colombian destroyers, an all mixed United Nations Force. But I only lasted a year there. Then I was sent for and this time I was to be head of a Naval ordnance laboratory at White Oak. I was the first aviator to ever get that. They wanted to build an atomic depth bomb, which we did. We blew one up at a 2,000 foot depth off San Diego a couple of years after I started. We went out to sea and did all the tests. But I did that at the Naval Ordnance Laboratory. ADM Burke was just coming in as CNO and then he got me involved in ballistic missiles and the Killian study for General Eisenhower. I was a captain at the time

running a real big laboratory--that's a big laboratory.

C: How many people worked there?

H: 3,000 people worked there. It had everything; I loved it...it had...I had more fun there...from hypersonic wind tunnels to spark gaps and things of this kind. But then they decided that, well, he was going to make an admiral out of me. I hadn't had a big ship, and so he said, all right, I'll let you take the ROOSEVELT around the Horn.

C: What type of ship was the ROOSEVELT?

H: That's the FRANKLIN D. ROOSEVELT; that's an aircraft carrier. I took it around and while I was south of the Horn, in the middle of the winter down there, they sent me the message and made me an admiral. So they sent me right up to Washington as a rear admiral and I went right to work again, and now I was going to spend a long time because that was '56. I went back to the drawing boards again and I looked at the strategic situation for Burke and then he made me first Assistant Chief of Naval Operations for Research and Development.

C: What were you responsible for there?

H: All of the research and development in the Navy.

At that particular point, however, he decided that a rear admiral--I'd only been there six or seven months--didn't have enough clout in the Department of Defense or the rest of the place so he made me a vice admiral.

I was a rear admiral almost shorter than anybody. I was 46 years old when I got to be a vice admiral. Well, then I stayed a vice admiral for six years. I became the head of all the R&D, and that's when I began to work with Rickover in building the ENTERPRISE, and on the convection cooled reactor that we put in the SSN's. And I ran that whole--that was a billion four hundred million dollar program...the Navy's research and development program. It was very interesting. I survived Mr. McNamara and I was there for a long time. During the war, of course, I was hurt; I only have one eye.

C: During the Second World War. I'm blind in one eye. And I had a broken neck.

C: Was this in a crash?

H: Well, I was burned when I was shot up and came back... all the stuff got in my left eye.

C: That was in an airplane crash then.

H: Yes, it was. It gradually deteriorated and, of course, then they didn't want to send me to sea because of my physical disability. But then finally I'd been there so long and Burke was leaving--left, and then they wanted me to be Deputy CIA.

C: Oh, be Director of the CIA, like our ADM Turner?

H: No, no. I was going to be Deputy. You see--John McCone was the Director, and they wanted a military deputy. And they had an Air Force general, Cabell, a four-star

general there. They wanted me to relieve him as deputy.

C: Oh, I see.

H: But I didn't want that at all. I talked to Mr. McCone and I also talked to Mr. Kennedy. And so I said I wanted to go to sea. Well, I had helped build the ENTERPRISE, the BAINBRIDGE and the LONG BEACH. I took the LONG BEACH-- they're all nuclear propelled surface ships. So they said all right, we'll make you the task force commander of the first nuclear propelled task group. But they said we'll have to demote you to two stars. And I said that's fine by me if I can get out of here. But it took me back to rear admiral, and Mr. Kennedy could not understand this until he came to see me in 1962 with the Shah of Iran. He came aboard the ENTERPRISE to see me, and he came in my cabin, and I'll always remember he said, well, I understand now why the hell you didn't want to stay in the Pentagon. He was so cute about it. I had the command of the attack force in the Cuban situation. I was given that job. I had the ENTERPRISE, the INDEPENDENCE, the destroyers and the amphibious forces that were coming up that we were supposed to take Cuba within 10 days.

C: Was that the Bay of Pigs affair?

H: No, no. That was before; that was April 1960... '62 in October of '62 the missile crisis.

C: You were involved in '62 in the missile crisis?

H: Oh yes, I was involved in the other one too, but in a different way, with ADM Burke in the Bay of Pigs. But then I was involved during that period of time with the U-2. One of the reasons that they had wanted me to go over to the CIA was that I had a background in physics and a background in weapons. They thought that would be a very good job for a person of my background. But I am not the intelligence type. I didn't want it. I didn't like it. I'm interested in technical things but it's no place for me-I feel sorry for my friend Stan Turner.

C: Do you like something with more action?

H: Yes, yes. Anyway, I had been through the routine of having the FBI follow me and everybody know everything I did for years in the AEC. I couldn't go from one place to another. I couldn't go in a bar if I had two drinks or--I couldn't do anything.

C: I guess you're pretty strapped in.

H: Oh, everytime they'd get me. General Groves you know, he...well, look, that Admiral was in the Ritz bar with a good looking doll and a few drinks, she's probably a Russian and I'd hear all about it. They had all sorts of restraints on you and I couldn't travel here, couldn't travel there. So they--but I was fed up with that. But anyway I went and did all that then I became commander of the antisubmarine warfare forces in the Pacific.

C: Now, what year was this?

H: This was in 1963. Only to be out in the Tonkin Gulf with the Vietnamese when the Maddox thing happened and the Secretary of the Navy Paul Nitze and the Vietnamese business began in earnest. That was a disaster to my mind. I used to sit day by day and go through that routine.

C: Do you mean that you felt the Vietnamese War was a disaster?

H: Yes. I'm sure many people felt that way.

C: Why did you feel that way?

H: I'll tell you why I felt that way. Because nobody knew really what they were trying to do. What was the objective? What are you trying to do? It was the biggest--and I blame the military a hell of a lot. I only saw ADM Sharpe, he was the smartest military man we had, and he was the only man I know who stood up to the President or anybody else and said you don't know what you're doing. And, of course, he didn't get to be Chairman of the Joint Chiefs. He should have been. All of the people, Westmoreland, everybody who agreed, got to be the boss, you see.

C: Got promotions.

H: Yes, yes. The ones who didn't, well, I remember Brute Krulak, the Marine who told Mr. McNamara he didn't know what he was doing; he didn't get to be commandant either.

C: Oh, I guess that's life in politics.

H: Well, that's right. But when you get up there you

might just as well realize it. I mean, if you were on the other side of the fence and you were president, you would never appoint somebody to a job like that who didn't agree with you. So don't expect him not to be political. Don't expect Stan Turner not to be political. He's got to be. Anytime you get into a position like that, why certainly. The only other recourse you have if you don't agree, is to resign. But I was out there. I was getting a little fed up with the Navy at that time myself. In '65 I decided that I was always going to have a second career anyway. I decided then that I was going to get out of the Navy. And so I had a very fine job.

C: What did you have lined up?

H: I was to be Vice President of Research and Development for the Dresser Industries. John Lawrence was Chairman.

C: What is Dresser, I don't know?

H: All the oil business. I'd have been a millionaire a long time now. But I had it all set. And I was--accepting it. I left on my last trip out of Pearl to say goodbye to the Japanese and the people that I had been working with... Korean, Japanese, all of the people, and I went into Saigon. While I was gone, one of the reasons I wanted to do this, you must remember in those days there was no such thing as the Survivors Benefit Plan for your wife. If I retired and then died she would have gotten maybe \$80 a month or something like that.

C: Back in 1965?

H: Yes, sure. It's only since survivors benefits come in that she has anything from my retired pay whatsoever. I had raised my children, I had helped some others, and I had to get some money so that my wife wouldn't have to go live with those children.

C: Pardon me, can I ask you this question? I know it's kind of an aside, but if, let's say, somebody died in action...

H: That's different. In action they get six months pay, but they won't get anything like the Survivors Benefits Plan. Now, my wife would receive 55 percent of my retired pay. But I have to contribute to that. Everybody on active duty has that now. Before it was passed in '67, in '68, it wasn't available. Anyway, I decided to go out, and they sent me this big check for my first month's pay, and I had already deposited it.

C: Oh, this was from Dresser.

H: Yes. When I got back the Secretary of the Navy had called and talked to my wife. And the CNO had called and talked and said they wanted me to come and take the War College. And I said, War College?

C: You had never attended the War College?

H: I told them that...that I've been to Cal Tech, I've been to California, Pennsylvania, Stanford, University of New Mexico, but I've never been to the War College. The only thing I've ever done at the War College was take

two correspondence courses; one on International Law and one on Strategy and Tactics. And I said...

C: Had you ever been to any other service schools in the Navy?

H: No. I was never smart enough. That's what they said. They didn't send me. I didn't go to Navy PG school. I put in for it. Duty assignment or something, so I never got it. I paid for most of my own graduate education. Well, when they brought up the War College I said, War College. So we had a big talk about it and my wife said you can always get a job...I called the Secretary about it and told him by reservations. And I said I didn't think the Navy believed in the War College anyway. The history wasn't very good. There'd been one man selected for admiral, since World War II, there. And if you looked at the history all the way back to the early days, the Navy never really believed in it. And so we had a good discussion and he said, well, that's the reason I want you to go there. I want you to change it. I want you to do something about it. I said, well, if you'll give me the authority and the ability to change it as I see fit, and to build a new college, I'll go.

C: What was your personal assessment of the War College and Navy education in general, before you went?

H: Well, it was good. I think the rest of the education or postgraduate education, technically, was fine. I

didn't think in the international arena or in the joint arena of the education process it was any good at all. All they were teaching up here was the Joint Chiefs of Staff routine; a green paper, a red paper, a pink paper, who cared what color the papers were. They were mechanics of being members of the Joint Staff. But there was no original thinking going on--well, when I came here it was at a pretty low point.

C: You came in what year, now?

H: '66. First of '66. So I came here. And I had a pretty good chance to look at what was going on. I inherited the George Washington Program, which, in a way was helping and in a way was hurting.

C: How did you feel about that program? There was controversy over it.

H: Well, at that particular point, I couldn't get more billets, I hadn't been able to establish my chairs, I had no faculty. All I had were some passed-over commanders, some students that graduated last year to teach. And I wanted a good faculty. A college is made up of a faculty. So I wasn't about to get rid of them right away until they gave me some civilian faculty with some knowledge. And I talked to President Elliott of George Washington University and we had come off with very fine colors for what we were doing. So I said, okay, but I'm going to apply what George Washington was doing to all of my

students. So that was the first year that I gave every man that came in a graduate records examination.

C: And why did you do that?

H: I did that because I wanted to see what state of knowledge he was in; what did he score. And I wanted the War College to be an individual intellectual year for the man. I wanted to interview and talk to every student and I did.

C: Oh, you did?

H: When he had a low mark in words, verbal, I said you're going to really work in this area. Most of them were better in math than they were in verbal. And--I wanted them to broaden their experience. I didn't want a submariner to write about submarines. I wanted to discuss the research situation, what they would do a paper on. I wanted to do so many things, such as I wanted to start a chair in economics. None of them knew anything about economics. We had the King and Nimitz chairs, and then I got Fred Hartmann, who was my right arm in on it. He was a fine educator and knew what some of the problems were. It was difficult to change. One of the greatest things that I wanted to change more than anything else was my ability to select the students.

C: What did you feel about the caliber of the student body?

H: When I first came there the caliber was terrible.

Very low. At one point we had more Army and Air Force students than we had Navy. But the Navy was all gone to fight the war and they wouldn't spare them.

C: This was the Vietnam period?

H: Yes, oh very hot and heavy. And so I couldn't get the good people. And so it was done--well, it was a place to put somebody. And so I fought bitterly on this. And I never really succeeded in that area. I could never get ...but I did succeed in...I decided that we had obsolete, terrible facilities, even if we had students that couldn't learn much with the faculty we had. So I had to do two things. I had to get authority for the chairs, which I got.

C: Now what chairs did you establish?

H: Economics--practically all of them that are there now. Economics...

C: Military Management?

H: All of it.

C: Naval Science.

H: That chair routine...the Undersecretary Baldwin and Chuck Baird helped me. In this particular instance I wanted to get a good faculty, and I wanted to rebuild the College. This is when I assigned two real good captains to be Bonnie and Clyde, and to be my team to design the new War College.

C: And who were these people?

H: That was Captain Morgiewicz and Captain Pickert. And those buildings and everything today are the outgrowth of what started in '66.

C: They did a study too, didn't they? A staff study on the War College?

H: We did a staff study on the buildings and on the faculty side of it. There were two separate things. The captains did the buildings and the facilities for me. The staff study on education was separate from this. But we started right from then, and we were going to do--in my time, if I could, I was going to upgrade the whole curricula. I was going to eventually try and make it a real graduate school.

C: That was your aim?

H: Yes. A lot of things were very frustrating...getting money, getting authority. Mr. Nitze did do what he said. He did back me up, except the Navy wouldn't give me the money for the facilities. I had to go to Mr. Sikes and to Senator Jackson, who really made the Navy give me the money.

C: So the Military Construction Program was your idea?

H: Oh, yes. I started the...from the time I came in here I did a study myself and the Navy only spent \$878,000 on the War College in military construction since 1884.

C: That's a paltry sum.

H: Yes, it was. And they didn't believe in it.

C: Now why didn't they believe in it?

H: Because there was...if you go back...I don't know whether you read my article, "I Had a Dream." The reason they didn't believe in it was because they felt the naval officer's place was at sea. You can't get any education ashore, and all of this education--Sims fought against this, Mahan, and Luce trying to convince them that they did need to educate the people in the science of war. There were no experts. There was always rivalry between the Naval Academy and the Naval War College. As a matter of fact this money that we got from this complex, the Navy wanted to put it in the Naval Academy.

C: There's more loyalty to that institution?

H: Oh, yes, There was much more loyalty to the Naval Academy than there was to the War College. Very much so. I found that out...in that particular...I had done a lot of work with Congress as the head of R&D, so I knew a lot of these people. And I had helped Mr. Sikes put a space medical laboratory in Pensacola. A lot of people may say he's crooked and everything else, but man, you wouldn't have that College today if it wasn't for Mr. Sikes. He told the Navy you either build that College or you won't get any Military Construction money. And that's not in Florida.

C: He laid it on the line.

H: Yes, and now I'll tell you, you'll get many people

who'll try and take credit for that, and it's a beautiful complex. Success has many fathers, but failure has none. That was a tough...and in that particular article in my giving credit, I wanted to make sure that Captain Pickert and Morgiewicz really did that job and got the credit.

C: Did these men have a specific position at the NWC?

H: Yes, they were my planning...they had been on the staff as instructors and they were my planners to make the new War College. They did it.

C: They were kind of specialists in this?

H: Yes, that was their one task. They had a show that they could put on. They could show you what the Army had, the Air Force, and what we didn't have, a converted barracks, Sims Hall. As I said, I was there in 1952 as a sailor, and it was still in the place. But I felt that the College...I was delighted I came, I must say, even though I didn't make all those millions. I was delighted that I came, and did that job because I had tremendous intellectual stimulation out of. I had got back to see all of my friends again at Harvard. I really enjoyed every bit of it. I would have stayed longer except when I went for my physical exams--I was gradually losing, I thought I was losing both my eyes--and they decided that I had to retire, and that if I didn't retire that I would lose my disability. You don't understand the law about that, see. But if I stayed on active duty they'd say I

wasn't disabled. So what they did, they made a compromise to start with. They put me--they retired me and put me five years on the temporary disability list. So if I had lost the other eye they would have taken care of me. But, nevertheless, when they finally retired me after five years, I went to become Vice President of General Dynamics. Also I started the Board of Trustees, advisors for the College. The reason I did that was I always had used them in laboratories and I could always use them to swing political weight down in Washington. I got the President of Dartmouth, Fred Dickey, who was a marvelous man, and I got the head of the Barvard Business School.

C: Now these were all civilians weren't they, for the most part, that were on the Board of Advisors?

H: That's right. And I got the Secretary to let me establish that. They were my advisors. And then another thing I started was the President's hour. And I could ask any questions and they could ask me any questions.

C: Was that with the students?

H: With the students. The faculty was there. They could ask questions. Everybody was there. They'd come in, I'd sit on the stage and have the President's hour. Tell me, now, what's bugging you?

C: So you had a lot of feedback from the faculty and students.

H: Oh, yes, We had very fine--but nobody had ever done

that. The President had never--and I always got the first question. Whenever anybody lectured I was there.

C: Oh, you attended every lecture, too?

H: Every lecture. And so when the question period came up I used to always warn the speaker. I'd say, now, the President gets the first question. I always gave him some horrible question that would really start a good argument. But that was what we wanted. And so I attended every one. Of course we only had that one small auditorium.

C: Pringle, right.

H: Yes. And it used to make me made as could be. But it was very homey and very close. But then we had the graduation in the auditorium down in the movie place and I invited both Sikes and Jackson to make the graduation addresses on two separate years. Just to show it to them.

C: It's kind of tacky.

H: Yes, kind of tacky. But now that I look back on it, it was a great experience and I think that my successors picked up the ball and ran--they were two different types.

C: I wanted to ask you about your successors, Colbert, Semmes, and Turner. Did you have any hand in picking your immediate successor, Admiral Colbert?

H: My immediate successor, I did. Secretary Ignatius, when it came up that I was going, asked me, and Colbert, Dick Colbert, had been the first man who had been the boss

at NCC and had done an outstanding job. I talked to ADM Moorer and I talked to ADM Burke, who had retired, who had known Dick Colbert who had started the course, you see and had selected Colbert, so it was on that basis that I told Mr. Ignatius, yes, that he would be the best man, and he relieved me. Now, I went to industry, of course, as a vice president. I was on his Board of Advisors, but we didn't have many meetings. I got off the Board of Advisors and I didn't follow too closely--but he, in general, followed what we used to discuss, the George Washington Program. Why did I retain it at the time? As I told you, it gave me some faculty that I didn't have and couldn't get at the moment. I talked to Elliott, the president of the university. I knew that it was competitive to the regular curriculum; there was no question about it. However, it was selective, and I had the idea at the time that if I could give everybody a graduate records exam and could put them in different groups, I would be able to get a better total educational result. In other words, forget the George Washington Program. If I had two men come in there and if they had GRE scores way above the 680's, and I'd say well it's silly to do--I want you to do a year's thesis on a certain area as an elective, and you'll go to all the lectures at the time. Once again, the George Washington Program was popular with the students. I brought this up in many President's

Hours, a lot of our people thought unless they had an advanced degree that chances for selection were very nil.

C: For promotion?

H: Yes, promotion.

C: Is that true?

H: I don't believe that. I've sat on many selection boards. And this is why we have so many people with advanced degrees in international affairs, or political science, and I agree that it just wasn't the way to go.

C: Ticket punching, I guess.

H: Oh, that's exactly what it is, ticket punching. Well, I must say, the faculty of the George Washington group were good people, and if I could have hired them just in the chairs I would have. As a matter of fact, we've got one. I decided we'd keep that until I could get adequate faculty to replace it. And I wanted civilian permanent faculty. I didn't want to have to take graduate students and bring them in as instructors. That's what was happening when I came here. See, if a captain would graduate from the College and the next year he'd be an instructor again. That would just make the Bureau of Personnel job very simple. He didn't have to get a new man. He stayed here. They didn't have to move him. But I had a lousy faculty. They didn't take into consideration whether he was good or bad as an instructor, or as a professor, or anything else.

C: Most of the faculty then was military?

H: Yes, yes, that's what I was dependent on, and I had to get civilians, and I had to get a way of getting civilian faculty. I talked with Colbert about it later when I was on the Board of Advisors if he could replace and get a good permanent faculty, and I also insisted that he advise, really, that they don't give him tenure they give him--the people that have tenure you decide, like Hartmann or some of these people, but you try to rotate and keep the young people coming in and out from universities for two or three years and pay them well. Now in that respect I did get the pay raise for them. We were very competitive professionally, and then when we started to go on higher and getting the chairs like O'Connor, and things of this kind, I don't know whether the George Washington Program survived Colbert or not. It may have.

C: No, Turner cut it out.

H: But it did survive until that time.

C: Yes.

H: There was a lot of discussion on it. I gave you my reasons why I retained it. That was a turning point of going from a military faculty to a civilian faculty.

C: There'll always have to be a military faculty at the War College.

H: Yes, but you have to have a basic group that have been

here and have continuity and know, and have been in the education business. Yes, you need the specialized skills of the military in many of the areas, but you've got to have those and we didn't have them. As a matter of fact, I guess Hartmann was the first one that we hired. And he is in the Mahan Chair. Now, it did compete with the regular curriculum, but I did have a morale problem with my students about wanting to get an advanced degree.

And I even had the Army people come and say why don't you do like the Command and Staff School in Kansas and grant a degree yourself. Well, to get a degree granting institution is a very difficult thing. And so I said no, we can't possibly meet the requirement, and I don't think you want it. But you see, they said and argued that, and the record shows that the students were right, that graduating from a war college meant absolutely zilch as far as promotion was concerned, and it didn't mean anything.

C: And it isn't highly regarded in the upper echelons or with those on the selection board?

H: No. The last man who got selected was Don Felt and he'd have been selected whether he'd been here or not.

C: It had no bearing on it.

H: No.

C: Do you think it still does not in 1977?

H: I'll get to that as we go along. Colbert struggled

with the same thing I did of trying to select the students. Now this is where I really give credit to Turner. Turner had a much closer in with ADM Zumwalt than, I guess, did anyone else at that time. If anybody was to ask me what contribution he gave to the College, the biggest thing he did was to reorient the Navy on getting and selecting the best naval officers to come here. Because the National War College--everybody gets selected from the National War College--now called the Defense Institute, or whatever the hell they call it, but the people who came here didn't get it so they always wanted to go to the National War College in Washington. Now he was the man who was able to upgrade the selectees of the War College, And now the recent selections boards have been good. They've begun to promote them. But now let's see, was the Chief of Staff here promoted to Admiral? He was, but he was promoted before he came here.

C: Yes.

H: You see, so, what we have to do is keep upgrading the top people, the top officers with the best potential should be sent to the War College. And the President of the War College, I always felt should have a say in this. Now, the one man I fired out of the War College while I was there--it was very...

C: You mean a faculty member of a student?

H: A student.

C: Oh, you let a student go?

H: Well, yes, and it was unfortunate in a way--I mean it was a CIA student. Most people don't know--you know people say, well, you never fail a student. That's not true.

C: Is that because he wasn't doing the work?

H: Yes, he wasn't doing anything. But, you know that was a very sensitive thing--I was told then. But I said alright, I haven't failed any of these other clods you sent me, because they did send me a lot of clods: passed over commanders, guys who never had a chance for captain, and they were just doing time. So that was the weakest point of the War College when I came here.

C: The quality of the students?

H: The quality of the students, yes. That was the weakest part of the College; the students they sent. And I never had a chance to really--sit in on the selection process. They would let me send a junior man to go sit on the selection board but he had very little say. Whereas if I went--I was the senior Vice Admiral in the Navy--there was nobody senior to me, I would have been the senior man. Another thing was that I did not report to the Chief of the Bureau of Personnel. Most people don't realize that. I reported to the Secretary of the Navy and the Chief of Naval Operations and no one else. And that was one of the deals that I made before I came. Now, I believe that Colbert went back to the Chief of the Bureau of Personnel and I think Turner did too.

I think this is what happened. But that was one of my biggest problems.

C: The student body. How did the students respond to your elective program? You did initiate quite a few electives and special programs at the War College.

H: Yes. I did my best to get their interest in this, and I would say they responded very well. They were uncertain at first. They needed help in selecting subjects that were worthwhile. We really did have good rapport in that area, and I must say that the students themselves brought up the idea of not only doing it individually, but if we had three that had an idea and wanted to do an elective themselves, a research project, we would permit it rather than just let every man have an elective. But we did and we had very good results. The actual numbers Fred Hartmann would know, because we did have good results.

C: And you also formed ties with some of the local universities.

H: Oh yes. I had them all up to Harvard, MIT, Brown. Actually, I had those faculty come down here to talk, and I started the Sloan Management School for the selected Admirals here in the summer.

C: Oh, what was that?

H: Every man who is selected as an Admiral is sent to the War College for a three week course by the Sloan

Management School of MIT. I began that. MIT was very helpful. They still run it for us. And instead of sending newly selected Admirals to do the four days in the Pentagon, or something of that kind which they used to do, they send them here now. That's done in the summer or right after the selection process, whenever it is. And so we had a great rapport--here we are in New England with all of the finest institutions--we should get the War College as closely allied with Brown and everybody that we possibly can. Oh, I got people like Galbraith, I got everybody to talk and speak, and the students enjoyed that very much. It was different from having the Chairman of the Joint Chiefs, or the Secretary, or who the hell else to come up and talk.

C: You did want to create an atmosphere of intellectual freedom, didn't you, and have people speak their mind?

H: Yes, oh yes. Step up and speak your mind. The more argument the better. Oh we used to have some real good ones, particularly the one I always remember was Dean Rusk. He was a marvelous person and he as the Secretary of State, made a point of coming here all the time.

C: Yes, he visited the service schools and didn't ignore them.

H: No, he did not ignore them. But, of course, the Vietnamese business was going hot and heavy. As we went down the line we did get some better students. I

got people like Don Engan, who is now an Admiral and I got quite a few who were really top-flight people. But on the whole it gradually just improved. Now I don't know what it was like during the Colbert regime, but I do know that Turner did solve that particular problem. How he solved it I don't know. I've often asked him and he said well, it was a combination of things, but nevertheless, I think all of the Presidents of that particular three, and I believe, Semmes, who had been Chief of the Bureau of Personnel, recognized that, very much so. But I don't know what he did in that reign at all. I was not associated with the College then.

C: I want to ask you a few questions, some very specific ones about your educational technology committee. I think I read about that at some point in your papers. Did anything positive result from that committee?

H: Well, I think some of its has evolved. You see what they did on the Harpoon study; I think some of that is the result of that, and it's come on down. It was my idea to have the Board of Advisors, and what were they to do? Why were they worthwhile? If I could get the President of Dartmouth College to agree with me to do something and he would sit and talk with the Secretary of Defense and say, look, you ought to do this at the War College, it carried weight. It has a civilian educational weight. And you must remember there was

Enthoven and all of the Whiz Kids in the Pentagon at that time. So the Board of Advisors was one way of getting influence outside of the area, if you have a good board and they're competent in their field, which was education. And we did. We had Morris Tauber--we had a good Board of Advisors. And it really was worthwhile. I don't know how they work out now.

C: They still have them. That's a carry-over. I wonder if you could comment on some of the significant personalities at the Naval War College.

H: Fred Hartmann was my educational right arm. And Fred Schneider was the Chief of Staff. Admiral Schneider was a fine person, but he was very conservative. And people used to tease me that they put him up here to make sure I didn't teach physics, or something like that, at the War College.

C: You obviously didn't choose him.

H: Oh, no, I did not choose him. He was here when I came here. He was a very competent man, completely thorough, a number one administrator. But he was to the right of John Birch when it came to being a liberal. And so I had arguments all the time with him as to--and I'd say, well no, we're going to do it this way. And I didn't care whether it was a red, white, and blue paper, or pink, he'd worked with the Joint Chiefs, you see, in that regime of the tank and down there with the Joint Chiefs of Staff, and all of that rigamarole. That's no

educational experience, I said. That didn't mean anything. We usually came up with a pretty good consensus.

C: Did you have a Deputy?

H: Schneider.

C: Oh, Schneider was both Deputy and Chief of Staff.

H: Yes. He was a flag officer. That was another one of my requirements.

C: That the first and second in command be a flag officer?

H: They weren't going to upgrade--what does it mean in the Navy? You mean it isn't worth a flag officer slot?

I mean I don't understand that.

C: That's changed now.

H: It's a captain now. And you have a Rear Admiral now. My comment on the faculty was there were some good ones and there were some bad ones. You take the faculty I inherited when I got there. I had people on the faculty who were passed over two or three times--as officers.

C: Can you comment at all on the Civil Servants who were here?

H: Oh, yes. They were very good starting with Mary Murphy--the College couldn't run without Mary Murphy.

C: The President's Secretary.

H: Yes. But she forgot more than most of the Presidents ever knew, I told her. But I would say that all of the people in the civil force that worked for us, including Jesse, the gardner, were very dedicated, hard-working

people. They believed in the College. I don't know what they thought about the Navy though.

C: They were loyal to the institution, anyway.

H: Yes. I would say they did an outstanding job, with reduced funds, starting from nothing. I mean, this was really a problem.

C: Can you assess the Naval War College in the light of its history and its mission to train officers for command and management positions? Do you think it fulfills that role?

H: During the hiatus from World War II until now, I don't think that it has done too good a job, because of the inputs that they had in the 50's, in those years. Your leaders today, when you go down the flag list, how many are Naval War College graduates? If you want to assess the success of the College based on that, well then you would say it was not a success. None the less, there are a great number of well-educated captains, products of the College, who haven't gotten to the top rank. If you assess leaders, well, take the Vietnam war, that's what they were trained for, how many War College graduates were involved in that. On the whole, it's been successful in spite of the odds against it, I'd say. As a matter of fact, you can trace this what I call the least common denominator approach, when I used to get on my high horse with the Secretary about the College in arguments, that

the common denominator approach is when the unification came in and you got the Army, the Navy, and the Air Force. You've got an Air Force University, an Army War College, and in addition to the Naval War College you have the National War College, the National Defense Institute as they call it now. Well, there are a lot of people involved in that. There's a lot of money involved in that. Then when they try to make the curricula all the same, it doesn't make good sense.

C: It defeats the purpose.

H: Yes. And it should be mission oriented. I think that's what's going to happen. But, you see, before unification, the Naval War College was supreme in its field in the whole area--up to WWII. The Army couldn't even touch it.

C: So it compared favorably to other service schools.

H: There was no Air University and the Army War College was so bogged down prior to WWII, but the Naval War College during that period and up to WWII was supreme in its field. Then all the leaders were from the College in WWII, Spruance, Nimitz, Howling Mad Smith, all of them. But then comes unification and then comes trouble from 1950 on there for about ten years they fed nothing into us, so nothing came out. They really didn't feed the best people. Now before WWII all the best people went to the War College. There wasn't a National War College then; there was no competition to it.

C: How would you say it stacks up now, during the early 60's or late '70s. Do you think it compares favorably with other schools of the services?

H: Oh yes. You've got the better faculty. You have much better input. And you have better facilities which helps tremendously. It stacks up very well in the present day. Very much so. I lecture at the Army War College out in Pennsylvania, Carlisle, and down at Montgomery, and ICAF and I see the students, and I also lecture at the Management School in Belvoir and they compare very favorably here.

C: Do you think it will last well into the future?

H: Oh, yes, yes, I do. It's more important now in a way. Yes, I think it will last, because the United States is coming home. The world is shrinking and you're going to be taking more time to educate a lot of people. And you've got to educate them in the world, which is what they're supposed to do, and really be thinking of some of the problems. Is it right. Where are we going? The real problem here that worries you more about a college like that is the fact that here we have the Korean War and the Vietnamese War but the U.S. Navy has not really been involved in a war at sea in thirty years. All of the wars we have had are very peripheral sort of things. Now the difference between WWI, the Battle of Jutland and Midway, is roughly about twenty-six years.

But the difference between Midway and today is over thirty years--thirty five years to be exact--and man's knowledge has doubled twice in that time. So I would tell you that any of the concepts you have unfortunately are going to be outdated from the technological point of view. I mean you're going to be using everything from space to lasers--if we don't have people who are going to be thinking of those sort of things and know how to employ them at sea and in the air, well, we're going to be in a great deal of trouble. I think that its only in an atmosphere such as this, I can assure you, where you can sit down and have the chance to read all the books and say, well what is going to happen. I lectured up in Cambridge yesterday on the role of the United States in the Middle East. What are we for? Are we for a free Israel? Are we against the Arabs? What do we want? Do we want just peace? What is our role? Who's going to think about it? In the hurly-burly of the Pentagon and Washington, you don't have a chance. It's a crisis management situation. I mean you just go from one crisis to the next, and each day is a new experience in the budget, or something of this--like that telephone call. What is going to happen in the Senate in the budget? Are they going to the DDG-47? Who's going to build it? Litton? Bath? And what's it going to cost, and they crank it around like that, so they don't have a chance to work--they don't even know

that the real world exists. In an atmosphere like this the student can really think about problems. He has the stimulation to do this. Now they should think about the Navy's problem, not the Army's or the Air Force's. They should never lose sight of the classical definition of national strategy because each of the universities have to use that definition, particularly the war colleges. I give you the definition because it applies. It is the use of a nation of its military, its political, its economic and its technical forces in peace as well as in war to accomplish their national objectives. Now, the greatest problem democracies have is to decide on what the national objective is. Like I asked you before, what is our objective in the Middle East? There is so much emotion mixed up with it, but here the student when looking at the problems, he keeps that definition in mind, then he has a pretty long ways to go. I wish the College was stronger in the economics and the management field. The management course has improved tremendously, but it still has a long ways to go. Turcotte, he's very good. But once again, it takes time to start from scratch, you see. It takes time to build that up.

C: Do you think the War College will always remain independent? Do you think it will ever be joined with some of the other War Colleges of the other services? I've heard that there's a movement to consolidate them.

Do you have any thoughts on that?

H: I think that on the basis of what I know, that Defense would keep them mission oriented. There'd be one mission, the Navy's mission, the Army's mission, and the Air Force mission. But I don't think they'd consolidate them. They'd consolidate at ICAF and the National War College, but I doubt very seriously they would consolidate all service colleges. Once again, as a businessman, if you had one instead of three schools it would be cheaper, I guess. In my philosophy of education, it's a continuing process and as you read my papers, I have all my speeches and everything here in my file, but education I define as the preparation for change.

C: Would you like to summarize your presidency and what you think your major successes were, and did you have any failures?

H: Oh, I had many failures, but my major successes were in getting the Navy to recognize some of the problems and my major successes were in getting Secretary Baldwin, Baird, and Nitze to back me up. A major success is, of course, the new complex, the new College. That, I guess, would stand for many years. But from a student point of view, I think that I got personal relationship between the students and the president back to where it should be. My predecessors hadn't been to a lecture, or hadn't really taken much interest in the actual process

and by having such things as electives, I think I broadened the scope. I tried to make it an intellectual experience for each individual student that year. There is no one perfect curricula in any graduate school.

You're exposed to many things, but there is no one perfect curriculum that a group can make up their mind about, well next year we're going to have this curriculum--no way, everybody's gone through this and that, because of the diversity of the students we receive from people without college degrees to people with Phd's. Now how do you devise a curricula for that sort of diversity and give each individual an intellectual experience? It just can't be done. We used to argue about it all the time. We just can't do it. We have to do it more on an individual basis. Now the student body is up higher than when I was here. When I was here it took all of my time to really get to know each and all of the students, which the President should do. I mean, the President of this College is different from most presidents. He helps raise the money, but he raises it from Uncle Sam, and it's a pretty simplified process compared to civilian life, but he has a job of really relating with the students.

C: You think that is a very important part?

H: Oh, that was the most important job I had there. My important message to them was, now, all right, here is my career in the Navy, which was an example of education.

I didn't manage it, but I tried to give them the quest, or the thirst for continuing knowledge. I always tried to do my homework so I--when they'd make some statement I could say, no, it didn't happen then, it happened thus and so, and we used to have some real good arguments, but the personal relationship of the President to the student is of vital importance. He shouldn't be aloof as the Admiral sitting up in the office. And that was the case when I came here. As a matter of fact, the president wasn't even here. I didn't even relieve him. He had left.

C: Would you like to comment any more on any of your other successors, Semmes, or Turner or LeBourgeois? I think you've said a few words on Colbert.

H: I don't know BJ well enough. He was Chief of the Bureau of Personnel when I was President. I couldn't change the selection system, but I worked directly for the Secretary and CNO. I would say that I believe that both Colbert and Turner who were opposite types, were able to install a lot of their ideas. Turner was much more abrasive and Colbert was a smooth operator, being the state department type, and that alone--Colbert's known all over the world. I don't believe there's an American Admiral as well known as Colbert anywhere. Maybe Admiral Burke--not Admiral Turner, not myself. He's known all over the world--everyplace I travel.

C: They remember him.

H: They do. He went out of his way with the foreigners. He started NCC in '58, you see. He was exposed to people from all of these various nations. So they knew him. I also started something there, that was with the students really. I upgraded the Naval Warfare Review. That was my doing.

C: You mean the Naval War College Review?

H: Oh, it was terrible when I got here.

C: What did you do to try to improve it?

H: To begin with I had to change the format. There was a lot of fighting and arguing about the printing of it. And once again they wanted to put me in bed with the Command and Staff School of the Army about its subscriptions and everything. But then I wrote a monthly message, The Challenge, every month.

C: Oh, yes. Did you start that?

H: Yes. It's still going?

C: It's still going.

H: I made a point of writing something each month. Because, once again, I wanted to get the students involved with the Review. I said a graduate education institution needs a publication, and it won't be a good publication unless the students and the faculty get involved.

C: Did you want student contributions to the Review?

H: Oh, yes. Oh, certainly. We had students discuss

as to what we should put in it, I mean selection of articles. When I would get it up to see what was going to be the next issue, I would bring it up at the President's Hour and say, look, these are some of the things... and, of course, on some of the electives and the research papers why we were the publishers. That was one of the things we wanted to come out of the research business, how to publish papers, just like we do in physics or anything else, and if you've done your homework, you'll publish or perish, I guess. But nevertheless, an institution like the War College needs a publication, and you have to have the students involved in it. If it's done by outsiders, forget it. The outsider unless he lectures here it isn't published. You'll find that's very treasured, that publication. All the graduates of NCC, every place I go, the heads of the Navies from those nations, there's the Naval War College Review.

C: It's circulated very widely.

H: Very widely, but still restricted to the College people. It goes to the very ships at sea. That I really did. I had a big fight over that. If you go back in the library and see some of the old editions of that thing you'll see what it was like before.

C: Now it's real slick. It's very professional.

H: Oh, sure, you couldn't have it that way. It's professional now. If you want to have a professional

school, you've got to have a professional publication. That I consider as one of my accomplishments, and that didn't get much sympathy from the Navy Department.

C: Why not?

H: Well, they didn't understand graduate education. And they didn't understand about the library. I said, look, the Widener library has about 7,000,000 books. I need books. I want a fine library, a good graduate school library will have a million and a half volumes.

C: Did you feel the library was inadequate?

H: Yes, very much inadequate. We put a lot of money into it. That was another one of my accomplishments. When I came here nobody gave a damn about buying books. Because I'm a nut, I've got a cellar full and a room full. We were most inadequate. I got backing from BUPERS on that. I got money to buy books. Not as many as I wanted to, but now, where did you go to school?

C: Undergraduate school? Connecticut College.

H: Well, now, what do you think of this library vs. Connecticut College?

C: I haven't been back there in a long time, but this is an excellent library. It has many books on many subjects, anything that you'd want. I think it's excellent.

H: Well, I got Morris Tauber, who is one of the outstanding librarians in the United States, at Columbia University, I got him on the Board of Advisors, the first one, and said, we're going to redo the library.

C: He did staff studies, didn't he and special studies on it?

H: Yes, oh yes. But now you ask me about the Board of Advisors. Why was he useful to me? He was an outstanding authority on libraries. When he went to the Secretary of the Navy and said, look, it's terrible. You've got to do something. Well, I had an extra plug on it then. I had an independent technical auditor of the thing, and so that--it just worked, but that, the library, the publication, the selection of the students, and the facilities, if you want to look at those things, those are the areas that I really felt I had accomplished something. Well, as you can see what's grown from that, I think that was the start at that point of many things. The faculty has improved; the students have improved; we've gotten more civilian faculty; we have gotten the facilities finished. The library is really well done and the Review and all it has to do now is produce. But I really think in those particular areas when I came here nobody cared. Nobody really cared. As a matter of fact I often wondered, I never did ask Mr. Nitze wouldn't anybody else take the College. It didn't have a president. But like any other process of an institution of that kind it has to be evolutionary. It can't be revolutionary. That was an evolutionary process, and it worked. It worked well.

C: You started the ball rolling and the other picked it up in later years.

H: It would have been very easy to just upset the whole apple cart, but I think you would have alienated the people that you needed.

C: The help from.

H: Yes. That meant the students and that meant everybody. That was the spectrum that I approached the particular problem, and I enjoyed every bit of it. I read all of the previous President's papers, and that story, "I Had a Dream" I used to lecture, that was my lecture at the War College.

C: Oh, yes, I've read that.

H: I'd lecture because I used to think that the problems were different, but they weren't. When I read their papers they had the same problems I was faced with. Nobody believed in the College. Maybe they do now.

C: When did you retire?

H: The first of September 1968.

C: And that was from the War College?

H: Yes. I began my naval career there 43 years before that and ended it right there.

C: What have you been doing since then, may I ask?

H: I was vice president of International General Dynamics, which covered their overseas business. I had an office in London and Tokyo and Australia and in Germany. And I guess I travelled more than I did in the Navy.

C: Are you still involved with them?

H: I'm a consultant to them right now. I retired from there. And now I write a monthly column for the Government Executive. I'm on the Hertz Foundation to select scholars for physical sciences, that's the best fellowship in the U.S. And I'm on the board of the Steadman Mutual Funds, I'm on the board of the Praper laboratory at MIT, I'm the Chairman of the Visiting Committee of Harvard on Near East languages and cultures, and I'm a consultant also for computers to UNIVAC, and also to Babcock and Wilcox on nuclear reactors. When you retire, you always have this fear at first that you won't have enough to do, and as a consequence you over-extend yourself. I keep very busy but I've enjoyed every bit of it. I've worked in the Atomic Energy Committee business, I've worked in industry, I've run laboratories, and I've been in the Navy, and I've seen it from all angles, and it's a very broadening experience to see how it is from all viewpoints. Sometimes I've often wished I had just gone back and been a teacher. Just go back and sit down and teach a course. And what would I teach, history? I love history. I had to lecture in return for--I used to lecture in history at Harvard when I was here as the President. Each of the universities made my pay my way, because when they came to lecture they said, well, we want a lecturer from the War College, and I was the lecturer. I lectured at Dartmouth, Harvard, MIT, and Brown, and there were different

ones, I mean, I took them from the 5th Century to the Battle of Lepanto. That's a real feisty, historical time. But, then, it was fun, and I've enjoyed my civilian business. You didn't see General Dynamics featured with any bribes. We never paid anybody dime one.

C: Have you been connected with the Navy or the War College in any way since you retired?

H: I'm vice chairman of the Research Committee for the Navy, and I am also vice chairman for the Navy's Committee on Ships. I'm also vice chairman for the Coast Guard Research Development Committee. I'm also a consultant for the Livermore Laboratory in the atomic business. At the War College, right now, I've only gone to the seminars that they've asked me to. But I almost came back; Turner wanted me to be the head of the management course. And offered me the job, but I was involved too deeply in Iran, and all the rest of the world; I couldn't take it. I go out there a lot and I listen to all the lectures. I talk to the foreigners a lot, and I arranged for them all to go out to Minneapolis and St. Paul about two or three weeks ago. I had my friends at UNIVAC show them how a computer is made. I loved the Navy. As I said I didn't make a career out of it; I didn't think I was going any place after 43 years so I got out.

C: Do you have anything else you'd like to comment on before we finish?

H: No.

C: It's been my pleasure. Thank you very much, Admiral.

